

REMARKS

Status of the Application:

Claims 1–20 are the claims of record of the application. Claims 1–3, 5–10, 12–20 have been rejected and claims 4 and 11 have been objected to and would be allowable if written in independent form.

Amendment to the Claims:

Applicants have amended the independent claims to more clearly recite the invention. Furthermore, Applicants have removed some material from the preamble to the body of the independent claims.

Claim Rejections -35 USC § 101 (Non-statutory)

Claims 1-7 and 16–20 were rejected under 35 USC 101, because the claimed invention is directed to non-statutory subject matter. Claims 1–7, and 16–20 are drawn to functional descriptive material NOT claimed as residing on a computer readable medium.

The Office has asserted that claims 1–7, and 16–20, while defining a computer implemented method or process are non-statutory for not define a "computer-readable medium." Applicants respectfully disagree. Each of these claims recite a method or process comprised of method steps that are not mental steps performed by a human, but rather that include computer implemented method steps. From the text of the rejection, e.g., the examiner suggested amending the claim to embody "the method/program" on "computer-readable medium," and from the assertion that the method can "range from paper on which the method/program is written, to a program simply contemplated and memorized by a person, Applicants believe that perhaps the Examiner is mixing up a *method* with a *program*. The inventors are claiming a method comprising method steps, not a program. This is statutory subject matter. For example, it might be true that a program, e.g., a description of a computer implemented method can range from paper on which the method/program is written, to a program simply contemplated and memorized by a person, but a computer implemented *method cannot so range* from paper on which the

method/program is written, to a program simply contemplated and memorized by a person, as asserted by the Office.

Withdrawal of the rejection of the rejection of method steps under 35 USC 101 is respectfully requested.

Claim Rejections -35 USC § 102

In paragraph 4 of the office action, 1-3, 5-10, and 12-20 are rejected under 35 USC 102(b) as being anticipated by Dimensional Impressions Score!X, (c) 2002 Dimensional CAD/DAM Systems. Score!X, an Artwork Systems Inc. company, Bristol, PA and described online at <http://www.score-x.com/index.htm>; <http://www.score-x.com/flow.htm>; and <http://www.score-x.com/features.htm>.

Score!X at the time the present application was filed vs. the present application

Score!X is a product previously owned by Artwork Systems, Inc. Artwork Systems, Inc. is now commonly owned with the present invention.

Both the present application and Score!X are for the design of cartons, and each provides the ability to position and size graphics in top of a structural design of a carton and view the results on a three-dimensional rendering of the final carton on a computer monitor. An operator operating Score!X is able to produce data, e.g., a file containing a three-dimensional representation of a carton. Graphics from the flat substrate are used as texture images for the different flaps and panels of the box. Score!X then “folds-up” the combination to display a rendering of the three-dimensional carton with the graphics on the panels and/or flaps.

Score!X does not provide for any manipulation of the graphics itself, or for determining and outputting data, e.g., a file that is usable for printing the graphics on the substrate from which the carton is made.

The present invention is about producing data, e.g., a graphics file—a two-dimensional data file—which is then printed on the substrate which is then cut up, scored for folding, if required, and folded into the three-dimensional physical box. The present invention, therefore, is about graphic design for printing on the box. While programs like Score!X deal with placing graphics and “folding” to produce a three-dimensional representation for *viewing* by a designer, as well as CAD data for cutting the box, the present application is more concerned with generating a graphic design with the aid of

three-dimensional views, and when a user indicates acceptability, “unfolding” the three-dimensional combination to generate and output data, e.g., a file for printing on the substrate.

Independent claim 1

With respect to claim 1, the Office asserts that Score!X discloses in <http://www.score-x.com/flow.htm> page 1, paragraph 2–3; in <http://www.score-x.com/features.htm> as “design library,” “fully parametric designs,” “graphic flexibility,” and “revolutionary 3-D sections” the step of “designing graphics to cover surface regions of said carton to be printed with graphics.” Applicants respectfully disagree. <http://www.score-x.com/flow.htm> describes what is done in Score!X.

On page 1, “**Choose**” describes a process of selecting a structural design of a carton, e.g., from what Score!X calls its design library. Also on page 1 of the html document, and “**Resize**” describes modifying the structural design to fit the dimensions of the box. At this stage, no graphics that are to be printed are involved. Thus page 1 only describes the structural design.

In the “features.htm” document, “**design library**” refers to “a comprehensive library of structural designs that serves as a complete cross reference for both corrugated and folding carton as well as POP. The intuitive user interface allows the user to select the design not only by name, but visually in both 2-D and 3-D.” Hence these are structural carton designs. “**Fully parametric designs**” refers to an included library (of structural carton designs) that “can be easily resized by the user. After selecting the design, the user is then automatically prompted for the desired dimensions. The design is then resized and ready to be viewed in 3-D or exported to virtually any CAD system, graphics system or sample table.” Finally, “**revolutionary 3-D sections**” refers to “the ability to create and interact with the resizable library (of structural carton designs, pre adding graphics). The application dynamically renders and animates the folding process and the finished design. A rendering of the finished package or display can now be viewed, folded or unfolded at a touch of button, with or without graphics. The 3-D rendering is very realistic, even allowing for transparent viewing of inner packaging.” Thus, the cited parts of the features document also refer to either structural design, or the ability of view and manipulate 3D renderings. None of this describes Applicants’ step (b) of designing graphics.

Thus the Office has failed to show that the cited art describes the element (b) of designing graphics.

More critically, Applicants include the step (f) of **visually confirming from a computer generated three dimensional computer-generated image of said carton including graphics designed at step (b) and, if required, manipulated at step (d), acceptability of graphics covering relevant said regions, and modifying, if required, said graphics.** The Office asserts that this step is taught in <http://www.score-x.com/flow.htm> page 1, pages 1–2, and in <http://www.score-x.com/features.htm> by the “design library,” “fully parametric designs,” “graphic flexibility” and “revolutionary 3-D” sections

Applicants respectfully disagree. Regarding the “flow.htm” document, as described and quoted above, page 1 describes determining the structural design of the carton. Page 2 describes in “add graphics,” going back to the 2D view, adding from a library of commonly used graphic symbols, and dragging over to the 2D flat, and placing it on the 2D view. Score! X also allows one to *export* a two-dimensional template of your package design to *another graphics program*, and use this as the starting point to create one’s own graphic files, e.g., using Adobe Illustrator, Adobe Photoshop, etc., and then importing the graphics back to the two-dimensional unfolded view. Still on page 2, “fold” describes that once the artwork is in place, one can click on the 3D tab and Score!X folds the design. One can go back and forth between the folder and unfolded designs. Still on Page 2, “Rotate” allows one to manipulate the three-dimensional view on the screen. This way, one is assured of knowing exactly how the final manufactured product will look. **Nowhere on page 1 or 2 does the document teach or suggest Applicants’ step (f).**

In the “features.htm” document, as already quoted above, “*design library*” refers to a library of structural designs of cartons, “*Fully parametric designs*” refers to an included library (of structural carton designs) that “can be easily resized by the user.” “Graphic flexibility” refers to the flexibility of how graphics are added to 2D flats: using a library of standard packaging graphics, adding graphics to customize the library, or using a number of industry standard formats, e.g., Photoshop, Illustrator, etc., to lay out production graphics. Finally, “*revolutionary 3-D*” refers to the ability to create and interact with the resizable library and to dynamically render and animates the folding process and the finished design such that a rendering of the finished package or display can be viewed, folded or unfolded at a touch of button, with or without graphics. Thus, the cited parts of

the features document also refer to either structural design, or the ability of view and manipulate 3D renderings. None of this describes Applicants' step (b) of designing graphics. **Nowhere on when describing these Score!X features does the document teach or suggest Applicants' step (f).**

Thus the Office has failed to show that the cited art describes the element (f) of designing graphics.

More critically, the Office has suggested that Score!X teaches Applicants' step (g) outputting a computer-readable data, e.g., a file containing designed said graphics whose acceptability was confirmed at step (f). The Office asserts this is taught in <http://www.score-x.com/flow.htm> on page 2, and in <http://www.score-x.com/features.htm> under "revolutionary 3-D" and "powerful translators" sections.).

Applicants respectfully disagree. The "revolutionary 3-D" section, as quoted above, is about manipulating viewpoints such that a rendering of the finished package or display can be viewed, folded or unfolded at a touch of button, with or without graphics. The "powerful translators" section describes the import and export capability. Score!X allows importation of Bitmap, EPS, PNG and JPEG files for adding graphics to a structure.. A structural file can be exported in many common CAD system formats and a common format. HPGL is included so the user can output to a plotter or a sample table. HPGL is a plotter output language, so suitable for line drawings, not for generating files for printing. Score!X includes graphics translators include WMF, EWMF and EPS so that *a structure* can be sent to virtually any graphics application. "The most amazing aspect" is that Score! X includes the most cutting-edge 3-D formats: VRML, Shout 3-D and Viewpoint Media for tremendous flexibility in presentation and display of the 3-D package on the Web or anywhere else. Score!X therefore generates as output either structural formats for making the carton, or formats for displaying the 3D and 2D viewpoints. In no place do any of the Score!X documents provide for generating and outputting data, e.g., files usable for printing on the substrate.

To further emphasize the invention, Applicants have amended step (g) to recite determining and outputting computer-readable data, and that the computer-readable data is "usable for printing of said graphics upon at least some surface regions of said planar substrate."

Score!X does not do this.

Applicants also have amended the claim to more clearly recite the invention and to differentiate what is done on the computer and what is done by the user.

Claim 1, as amended is allowable over the cited art. Allowance thereof is respectfully requested.

The other independent claims

With respect to independent claim 8, the Office has stated that the recited features are similar to those in claim 1, and has therefore rejected claim 8 for similar reasons to the rejection of claim 1. Applicants respectfully traverse the rejection. There is no means for designing graphics for printing on the substrate in Score!X. There also is no disclosure, in Score!X of “wherein said user can confirm from visualizing said three-dimensional computer-generated image acceptability of said graphics, and can modify, as required, said graphics.” There also is no teaching in Score!X of means for determining and outputting computer-readable data, e.g., a file containing designed said graphics whose acceptability is confirmed by said user, said data usable for printing of said graphics upon at least some surface regions of said planar substrate.

With respect to independent claim 14, the Office has stated that the recited features are similar to those in claim 1, and has therefore rejected claim 14 for similar reasons to the rejection of claim 1. Applicants respectfully traverse the rejection for the reasons stated above. Applicants, have in addition amended the claim to add clarity. Score!X does not teach: (f) enabling said user of said software program to confirm from visualizing said computer-generated image created at step (e) acceptability of graphics covering relevant said regions, and modifying, if required, said graphics; (g) accepting an indication of said acceptability from said user; and (h) determining and outputting computer-readable data, e.g., a file containing designed said graphics whose acceptability was confirmed at step (f), said file usable for printing of said graphics upon at least some surface regions of said planar substrate.

With respect to independent claim 16, the Office has stated that the recited features are similar to those in claim 1, and has therefore rejected claim 16 for similar reasons to the rejection of claim 1. Applicants respectfully traverse the rejection for the reasons stated above. Applicants, have in addition amended the claim to add clarity. Score!X does not teach a substrate produces by a method that includes, inter-alia (c) creating a three-dimensional computer-generated image of said carton on said computer monitor or on a

different computer monitor, said image including graphics accepted or designed at step (b) and, if required, manipulated at step (d); (f) receiving from said user, said user confirming from visualizing said computer-generated image created at step (e), acceptability of graphics covering relevant said regions, and modifications, if required, of said graphics; (g) determining and outputting a computer-readable data containing accepted or designed said graphics whose acceptability was received at step (f); and (h) using said computer-readable data output at step (g) to control at least in part *printing* of said graphics upon at least some surface regions of said planar substrate.

With respect to independent claim 17, the Office has stated that the recited features are similar to those in claim 1, and has therefore rejected claim 17 for similar reasons to the rejection of claim 1. Applicants respectfully traverse the rejection for the reasons stated above. Applicants, have in addition amended the claim to add clarity. Score!X does not teach a carton produces by a method that includes, inter-alia: (f) receiving from said user, said user confirming from visualizing said computer-generated image created at step (e), acceptability of graphics covering relevant said regions, and modifications, if required, of said graphics; (g) determining and outputting a computer-readable data containing said accepted and designed said graphics whose acceptability was received at step (f), said computer-readable data usable for printing of said graphics upon at least some surface regions of said planar substrate; and (h) using said computer-readable data output at step (g) to control at least in part printing of said graphics upon at least some surface regions of said planar substrate.

Thus, the independent claims, as amended, are not taught or suggested by the cited reference. The independent claims are allowable, and allowance thereof is respectfully requested.

The dependent claims, not only claim 4 and 11, therefore also are allowable.

Reconsideration and re-examination are requested.

For these reasons, and in view of the above amendment, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Note: the Office stated that it provides citations of particular columns and line numbers in the references as applied to the claims “for the convenience of the applicant” stating in addition that “other passages and figures may apply as well.” While it is true that

other passages and figures may apply (but do not teach all claimed features in this case), the Applicants wish to remind the Office that the burden of proof to present a prima facie case of non-patentability rests entirely with the Office, and that the Office is required to provide such a prima facie case with respect to all limitation of each and every claim. If there are additional parts of the references that the Office believes teach the cited limitations, the Office should cite where and why the reference teaches such limitations.

Conclusion

The Applicants believe all of Examiner's rejections have been overcome with respect to all remaining claims (as amended), and that the remaining claims are allowable. Action to that end is respectfully requested.

If the Examiner has any questions or comments that would advance the prosecution and allowance of this application, an email message to the undersigned at dov@inventek.com, or a telephone call to the undersigned at +1-510-547-3378 is requested.

Respectfully Submitted,

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Date

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